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EXAMINER	
RAHMJOO, MANUCHER	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/617,229	KIM, YOUNG-CHAN	
	Examiner	Art Unit	
	MIKE RAHMJOO	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/10/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1- 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As per claim 11 applicant recites "a signal inputting unit receiving an R,G,B video signals from a host computer". Paragraph [0021] recites "referring to FIG. 1, a signal inputting unit 110 receives R,G,B signals and a vertical/horizontal signal from a host(not shown)" and [0028] recites only a host absent any description *what this "host" is*. Therefore, the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1- 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al (US Patent 5,644,325), hereinafter, King in view of Yamakawa et al (US Patent 5,809,366), hereinafter, Yamakawa.

As per claims 1, 4- 5, 7, 11- 12, 14 and 16 and as to the broadest reasonable interpretation by examiner, King teaches receiving RGB signals including a video signal, a horizontal and vertical synchronization signal (i.e., fig. 3 block 52) from a host (col. 16 line 55 corresponding to host) see for example figures 10- 11;

selecting one of an R, a G, or a B component of the RGB signal (see for example col. 3 lines 23- 27 for the selection of color blue and claims 2 and 3 wherein level select circuit controls the level of each R or G or B independently to control a color mixture) including the video signal as a selected one R,G, or B component and setting a region (fig. 3 window 56) of the selected one R,G, or B signal as a checked region which is checked. Column 6 line 50 through column 7 line 20 of King teaches "it is assumed that the user selects a position and size of the video window 56 i.e., (clearly corresponding to a region) and selects a digital color key (i.e., clearly corresponding to color

component) value for controlling the multiplexing of the video and graphics data streams. The color key value is typically eight bits. The position and size of the video window 56 and the color key may be selected (i.e., clearly corresponding to selecting region and color component) using the Windows.TM. program in a conventional manner. A narrow color key range (inherent teaching of minimum and maximum pixel level) is provided to the analog comparator 76, and analog comparator 76 determines (i.e., clearly corresponding to checking via comparison) whether an analog color signal on lines 72 is within the preselected range(corresponding to predetermined range). By identifying a range of color keys, slight drifts (i.e., clearly corresponding to deviation in the color key range) in the analog output of VGA card 54 will not affect the detection of a color key signal on lines 72.

However King does not explicitly teach detecting a minimum pixel level value in the checked region; comparing the minimum pixel level value for the selected one R,G, or B component with a predetermined threshold value to determine whether an abnormal one R,G, or B component is present, the abnormal R,G, or B component being a component abnormally input due to malfunction of the host; displaying on a screen a message indicator indicating whether the selected one R,G, or B component includes a video signal abnormally input due to the malfunction of the host; and signal input unit receiving RGB signals, a horizontal and vertical synchronization signal; and a storage unit storing the minimum pixel level value detected in the particular region of the selected one R,G, or B component.

Yamakawa teaches detecting a minimum pixel level value (determining the exact colors defining the point corresponding detecting minimum pixel level value to the colors of these points as said colors deviate the expected result by more than an allowable range wherein said deviation may assume any values in the minimum range and or maximum range see col. 14 lines 27- 30) in the checked region see for example column 14 lines 27- 31 for points deviated by more than an allowable range corresponding to the detecting a minimum pixel level;

comparing the minimum pixel level value for the selected one R,G, or B component with a predetermined threshold value (previous RGB data or allowable range) to determine whether an abnormal one R,G, or B component is present, the abnormal R,G, or B component being a component abnormally input due to malfunction of the host see for example column 14 lines 35- 38 wherein RGB data is compared with previous RGB data and correction is based on the results of comparison;

displaying on a screen a message indicator (corresponding to displaying a warning) indicating whether the selected one R,G, or B component includes a video signal abnormally input due to the malfunction of the host see for example column 14 lines 27- 35 through displaying a warning (a flag generated by the color calibration system) due to deviation by more than an allowable range OR improper reading of data;

signal input unit receiving R,G,B signals, a horizontal and vertical synchronization signal see for example figures 3- 5 for the color calibration system corresponding to the input unit for receiving R,G,B signals;

a storage unit storing the minimum pixel level value detected in the selected one R,G, or B component see for example the color calibration system of figures 4- 5 corresponding to the storage unit.

It would have been made obvious to one of ordinary skilled in the art at the time the invention was made to incorporate the teachings of Yamakawa into King to perform minimum pixel level detection and comparison with a predetermined threshold value and thereafter displaying of a screen message as to provide a color balance selection method which allows a user to select the color balance relative to the calibrated standard of an image processing device and therefore reproduce colors contained in a specific image chosen by a user and thereby offer an efficient and user friendly device see for example column 2 lines 7-23.

As per claims 2 and 9 Yamakawa teaches setting a flag (warning) which indicates whether the selected one R,G, or B component is abnormal when the minimum pixel level value is smaller (deviation by more than an allowable range) than a predetermined threshold value see for example column 14 line 32, and resetting (execute scanning again or repeat the process) the flag when the minimum pixel level value is larger (deviation by more than an allowable range) than the predetermined threshold value see for example column 14 lines 32- 33.

As per claim 3 and 10 Yamakawa teaches checking whether a flag indicating whether the selected one R,G, or B component is abnormal is set see for example figure 17 for the loop in the flow chart regarding the display warning block 494; checking if a video signal checking function is enabled when the flag is set see for example figure 17 (block 490) for the flow chart regarding color determination (checking) of the colors of the printed frames; and inherently teaches setting how long the message will be displayed and how long a predetermined warning message is displayed, when enabling of the video signal checking function is confirmed see for example column 14 lines 41-46 through the clock of the color calibration system which reduces the time (time setting for displaying a message) needed to perform the color balance adjustment along with reducing a load imposed on the processing system.

As per claims 6 and 15 and as to the broadest reasonable interpretation by examiner Yamakawa teaches the controller generates an on-screen-display (OSD) signal (displaying a warning) that enables and disables (the flow chart of figure 17) an R,G,B signal checking function.

As per claim 8 and in view of the rejection of the independent claims Yamakawa teaches extracting a minimum pixel level value when the pixel level value in the selected one R,G, or B component is smaller than the predetermined value see for example figure 21 and column 14 lines 27- 30 for points 530- 533 when there is deviation more than a allowable range.

As per claim 13 and in view of the rejection of the independent claims Yamakawa teaches a comparator (color calibration system) comparing the minimum pixel level

value in the selected one R,G, or B component with a minimum pixel level value detected in a previous signal (see for example column 14 line 36 fro comparing R,G,B data with previous R,G,B data), and extracts a minimum pixel level value see for example column 14 lines 30- 31 for improper reading or inputting due to deviation by more than an allowable range.

Response to Arguments

Applicant's arguments filed 10/16/2007 have been fully considered but they are not persuasive.

In response to applicant's remarks on page 7 wherein applicant points out the subject matter of host in paragraph [0003], examiner fails to see any adequate description of "host computer" and therefore the rejection remains.

In response to applicant's remarks on page 8, wherein applicant recites "King does not discuss or suggest that a region of a selected R, G or B component is set as a region to be checked", examiner points out examiner fail to see said language as being claimed.

Applicant also recites on the same page "King does not discuss or suggest that a region of a selected R, G or B component is set as a region to be checked" and "Here, the "region" that the Examiner alleges is the region of the selected R, G or B component of the RGB signal is actually the reference color key range to which the RGB color

signal component is measured against. The "color key range" is provided to the analog comparator 76 to determine whether the analog color signal is within the preselected range. The "color key range" is the range that is compared with the RGB color signal" examiner responds as follows.

King teaches selecting one of an R, a G, or a B component of the RGB signal (see for example col. 3 lines 23- 27 for the selection of color blue and claims 2 and 3 wherein level select circuit controls the level of each R or G or B independently to control a color mixture) including the video signal as a selected one R,G, or B component and setting a region (fig. 3 window 56) of the selected one R,G, or B signal as a checked region which is checked. Column 6 line 50 through column 7 line 20 of King teaches "it is assumed that the user selects a position and size of the video window 56 i.e., (clearly corresponding to a region) and selects a digital color key (i.e., clearly corresponding to color component) value for controlling the multiplexing of the video and graphics data streams. The color key value is typically eight bits. The position and size of the video window 56 and the color key may be selected (i.e., clearly corresponding to selecting region and color component) using the Windows.TM. program in a conventional manner. A narrow color key range (inherent teaching of minimum and maximum pixel level) is provided to the analog comparator 76, and analog comparator 76 determines (i.e., clearly corresponding to checking via comparison) whether an analog color signal on lines 72 is within the preselected range(corresponding to predetermined range). By identifying a range of color keys,

slight drifts (i.e., clearly corresponding to deviation in the color key range) in the analog output of VGA card 54 will not affect the detection of a color key signal on lines 72.

In response to applicant's remarks on page 9 wherein applicant recites "Yamakawa does not discuss or suggest that a video signal is analyzed which comes from a host of a computer system", examiner points out that King teaches a video signal. King also teaches a host (col. 16 line 55 corresponding to host). The rejection of 112 1st paragraph still remains.

In response to applicant's remarks on page 9, wherein applicant recites " Yamakawa does not discuss or suggest receiving horizontal and vertical synchronization signals from a host of a computer system" and there is no motivation to combine, Examiner would point out to the current citation form King and fig. 3 block 52.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Yamakawa is used for color calibration/ correction in selected areas of an image.

In response to applicant's remarks on page 10 wherein applicant recites " Yamakawa does not discuss or suggest detecting a minimum pixel level value in a checked region". The Little Oxford dictionary, 5th edition defines range as "vary between

limits". As per definition provided by the dictionary, said "range" disclosed by Yamakawa certainly falls within said definition and the limits would correspond to any variations of minimum and maximum therein.

As applicant's remarks on page 10, applicant recites "

In contrast, the present specification discusses that a minimum value detector 140 detects a minimum level in a particular region of a selected signal, and discusses that a comparator 220 of the minimum value detector 140 considers the pixel level value in the particular region as being a minimum pixel level value when the pixel level value in the particular region of the selected signal is identical with a predetermined pixel level value". Applicant also argues that a comparator as not being disclosed by Yamakawa.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., identical with a predetermined pixel level) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Examiner also points out that King teaches said "comparator" as per citation made of the record in the rejection.

In response to applicant's remarks on page 10 wherein applicant recites "

While Yamakawa does discuss comparing RGB data with the previous RBG data and correcting the parameters of the CMYK y correction unit 12 based on the result of the comparison", examiner responds as follows:

1) the arguments made by applicant are contradictory as evident form the underlined portion of arguments;

2) the primary art made of the record "King" teaches said feature "comparator" in the citation made of the record and therefore the arguments offered against said feature as missing from Yamakawa are null. The secondary art, on the other hand, also teaches the very same feature argued as missing. It is respectfully reminded that the rejection made of the record is obviousness type.

In response to applicant's remarks on page 10 wherein applicant recites "Yamakawa does not discuss or suggest that a minimum pixel level value is compared with a predetermined threshold value to determine whether an abnormal R, G or B component is present", examiner points out to said paragraph made of the record used for rejection which recites "the points 530, 531, 532 and 533 (corresponding to the color data containing RGB information) illustrated in FIG. 21 are analyzed (corresponding to comparing) in order to determine the exact colors defining the point. When the colors of these points deviate (broadly corresponding to malfunction) the expected result by more than an allowable range, it can be determined that the image data was not properly red or input (broadly corresponding to the abnormality) and a warning (broadly corresponding to message indication) for urging the user to execute the scanning again or repeat the process can be displayed (corresponding to the display of message). When the image data at the paint portions on the frame is properly read or input, the RGB data is smoothed by the RGB filter 6. Next, since *this RGB data is compared with the previous RGB data* and the parameters of the CMYK

.gamma. correction unit 12 are corrected based on the result of the comparison, the color balance is adjusted to accurately reproduce the colors at the desired points selected by the user", which is a one to one mapping of applicant's claim.

In response to applicant's remarks on page 11 wherein applicant recites " Yamakawa does not suggest displaying a message indicating whether a selected component includes a video signal abnormally input due to the malfunction of the host" and "Yamakawa does not receive from a host an RGB signal" and "the host is the transmitter of the RGB signal", examiner points out to said language as being absent from claim 1. In fact, there is no transmission of any signal of a particular type via any medium throughout the specification. Said malfunction as claimed and said deviation as disclosed by Yamakawa are broadly interpreted as equivalent. Merriam Webster Online dictionary defines deviation as " noticeable or marked departure from accepted norms of behavior". Said malfunction as claimed is divergent from accepted behavior or norms. Therefore, as per definition provided examiner points out to clear correspondence of what is claimed Vs. the teachings of Yamakawa in the rejected portion made of the record therein. King, on the other hand, as per citation of the record above identifies a range of color keys, slight drifts (i.e., clearly corresponding to deviation in the color key range) in the analog output of VGA card 54 will not affect the detection of a color key signal on lines 72 of fig. 3. The display device of the current application for patent is further viewed by examiner as a stand- alone device and applicant does not claim otherwise.

On pages 11- 13, applicant further argues feature which were addressed above, absent any analogy of said arguments vs. the rejections made of the record/ and or the response to the arguments provided in the prior office action.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6744917 teaches a color space detector (30) for recognizing a color space of a digital video input includes a high frequency detector (32) that identifies a presence of either blue data or possible color difference data in color information carried in the digital video input (corresponding to comparing of RGB input color data). A data sample correlator (34) is also used to identify a presence of either blue data or color difference data in the color information. Other detectors (36) provide an indication as to the type of color space present on the digital video input. A determinator receives and analyzes (corresponding to comparing of RGB color data) the results from the high frequency detector (32), the data sample correlator (34), and the other detectors (36) and generates a control signal in response to these results. The control signal indicates (corresponding to message) that the color information

includes one of red/green/blue data, YCrCb data, or indeterminate data. The color space detector of claim 11, wherein the high frequency detector comprises: a decimator operable to reject every other sample of the color information; a box filter operable to replicate non-rejected color information, the box filter operable to insert the replicated non-rejected color information in place of the rejected color information; a bandpass filter operable to pass the non-rejected and replicated color information in a selected frequency range; and a threshold comparator (comparing to a threshol) operable to compare the passed color information (e.g., input RGB data) to a threshold value, the threshold comparator operable to generate a result indicating (e.g., message indicator) a presence of red/green/blue data in the color information in response to the passed color information exceeding the threshold value.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Rahmjoo whose telephone number is 571-272-7789. The examiner can normally be reached on 8 AM- 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Rahmjoo

March 21, 2008

/Matthew C Bella/

Supervisory Patent Examiner, Art Unit 2624